

Appl. No. : 10/748,490
Filed : December 30, 2003

AMENDMENTS TO THE SPECIFICATION

Please amend the Specification as follows. Insertions are shown underlined.

The paragraph beginning at page 2, line 3:

It is known that oxidative stress caused by reactive oxygen species is involved in various inflammatory reactions including colitis. Redox regulation, a series of mechanisms regulating intracellular signaling, produces or eliminates reactive oxygen species to control intracellular signaling. Thioredoxin (TRX) is one of the principal factors responsible for this redox regulation. TRX is a multifunctional molecule that has been cloned as an adult T cell leukemia-derived factor and has the ability to control redox reactions by the thiol-disulfide reaction of the Cys-Gly-Pro-Cys sequence (SEQ ID NO:1) (Tagaya Y, Maeda Y, Mitsui A, Kondo N, Matsui H, Hamuro J, Brown N, Arai K, Yokota T, Wakasugi H, ATL-derived factor (ADF), an IL-2 receptor/Tac inducer homologous to thioredoxin; possible involvement of dithiol-reduction in the IL-2 receptor induction. *Embo J* 1989; 8: 757-64). Various reports disclose functions of TRX, such as the inhibition of apoptosis and enhancement of cytophylaxis reaction by diminishing the reduction or production of reactive oxygen species (ROS), activating transcription factors such as NF- κ B, Ref1, etc., inhibiting signal transduction to MAPK by ASK-1 inactivation (Powis G, Montfort WR. Properties and biological activities of thioredoxins. *Annu Rev Biophys Biomol Struct* 2001; 30: 421-55). Accordingly, TRX is known to be involved in enhancing biophylaxis.

The paragraph beginning at page 7, line 25:

The family exhibiting thioredoxin activity contains the sequence -Cys-X-Y-Cys- (SEQ ID NO:2) in the active site (wherein X and Y are the same or different amino acids selected from 20 kinds of natural amino acids and is called a thioredoxin superfamily (hereinafter sometimes referred to as the "TRX family").

The paragraph beginning at page 8, line 6:

Examples of polypeptides of the TRX family include those having the sequences:

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-Cys-Gly-Pro-Cys- (SEQ ID NO:1), -Cys-Pro-Tyr-Cys- (SEQ ID NO:3), -Cys-Pro-His-Cys-
(SEQ ID NO:4), or -Cys-Pro-Pro-Cys- (SEQ ID NO:5) in the active site. Among these,
preferable are those having the sequence -Cys-Gly-Pro-Cys- (SEQ ID NO:1) in the active site.